

**ABSTRACT**

The present invention involves a light system for stimulating or regulating neuroendocrine, circadian, and photoneural systems in mammals based upon the discovery of peak sensitivity ranging from 425-505 nm; a light meter system for quantifying light which stimulates or regulates mammalian circadian, photoneural, and neuroendocrine systems. The present invention also relates to translucent and transparent materials, and lamps or other light sources with or without filters capable of stimulating or regulating neuroendocrine, circadian, and photoneural systems in mammals. Additionally, the present invention involves treatment of mammals with a wide variety of disorders or deficits, including light responsive disorders, eating disorders, menstrual cycle disorders, non-specific alerting and performance deficits, hormone-sensitive cancers, and cardiovascular disorders.